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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/458,300	12/10/1999	THOMAS L. MCMAHON	MS1-365US	8699

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EXAMINER

SENFİ, BEHROOZ M

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/458,300

Applicant(s)

MCMAHON, THOMAS L.

Examiner

Behrooz Senfi

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-81 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-81 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see amendments/remarks, filed 11/4/2004, fwd 2/8/2005, with respect to the last office action rejection(s), have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Chiang et al (US 6,553,072) and Gharavi (US 5,235,420).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 9, 12 – 23, 24 – 30, 35 – 45, 46 – 81, are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang et al (US 6,553,072) in view of Gharavi (US 5,235,420).

Regarding claims 1 and 70, Chiang '072 teaches the claimed "encoding a source Image/layered encoding" (i.e. fig. 1, abstract), and "generating a base layer representing a low-resolution portion of the source image, and generating an enhancement layer representing a high-resolution portion of the source image" (i.e. fig. 1, col. 2, lines 64 – col. 3, lines 10), and the claimed "base layer and enhancement layer each has an associated aspect ratio" reads on (1080X1920 for HDTV which would have an associated aspect ratio of $1080/120=9$ and $1920/120=16$, $16/9$ and 720×1280 for SDTV,

which would have an associated aspect ratio of $720/80=9$ and $1280/80=16$, $16/9$).

Chiang '072 does not particularly teach that "the aspect ratio associated with the enhancement layer is different from the aspect ratio of the other layer/base layer).

However, such features are well known and used in the prior art of the record as evidenced by Gharavi '420 (i.e. fig. 1), wherein teaches generating different layers with different quality for different user subscriber, for example; Layer 1, with a low quality resolution (360 X 288) for low quality user subscriber, which would have an aspect ratio $360/90=4$ and $288/90=3.2$ of $4/3$, and layers 2 and 3, with successively higher quality/resolution (960 X 512 and 1920 X 1024) for higher quality user subscribers, which would have an aspect ratio $960/60=16$ and $512/60=8.53$, $1920/120=16$ and $1024/120=8.53$ of $16/9$, that is different from the aspect ratio of the first layer (i.e. col. 4, lines 60 – col. 6, lines 10, and lines 26 – 50). Therefore taking the combined teaching of Chiang '072 and Gharavi '420 as a whole, it would have been obvious to one skilled in the art at the time of the invention was made to generate multiple layers (base and enhancement) with different aspect ratio, to provide different level of quality available to different user subscriber as suggested by Gharavi '420 (i.e. col. 2, lines 25 – 28).

Regarding claims 2 - 3, 22 – 23, 37 – 38, 51 – 52 and 71 – 72, the claimed "wherein the aspect ratio associated with the base layer corresponds to an aspect ratio associated with low-resolution television" and "aspect ratio associated with the enhancement layer corresponds to an aspect ratio associated with high-resolution television" reads on subscriber with different level of quality as discussed above (in claim 1).

Regarding claims 4 – 5, 24 – 25, 56 - 57 and 66 – 67, combination of Chiang '072 and Gharavi '420 teach, 4:3 and 16:9 aspect ratio as discussed earlier.

Regarding claims 7 – 9, 45 and 60, combination of Chiang '072 and Gharavi '420 (i.e. fig. 1, col. 2, lines 64 – 66 and col. 5, lines 47 – 50 of Chiang) teach, generating an enhancement Layer and also the high-resolution enhancement layer may be derived from the combination (adding) of encoded base layer and encode enhancement layer). In other words makes the limitation subtracting the base layer from the source image (high resolution enhancement) to derive the enhancement layer obvious to one skilled in the art at the time of the invention was made. Furthermore, the prior art of the record Morrison et al (two-layer video coding for ATM networks), (i.e. fig. 3, enhancement layer) also teaches generating the enhancement layer by subtracting the base layer from the input signal, and the claimed “wherein the aspect ratio associated with the enhancement layer corresponds to an aspect ratio associated with high-resolution television, in claim 9” reads on (col. 3, lines 1 – 5 of Chiang).

Regarding claims 21, 50, 65 and 73, the limitations claimed are substantially similar to claim 1, and are the reverse process (decoding), therefore the ground for rejecting claim 1 also applies here with respect to (i.e. fig. 1, decoding process 105 of Chiang '072 and fig. 6, decoding process of Gharavi).

Regarding claims 13 – 15, 29, 46 – 48, 61, 62 and 76, the claimed “combining base layer and enhancement layer into a single transport stream” reads on (i.e. fig. 1, output stream of 110 of Chiang, and MUX 118 and 120 of Gharavi), and “transmitting only the base layer to decoder” (i.e. fig. 5 of Chiang, and fig. 6 of Gharavi).

Regarding claims 16 – 17 and 39 - 40, the limitations claimed “transmitting the base layer to an image decoding system using a first transmission medium and transmitting the enhancement layer to the image decoding using second transmission medium” and the “transmission format in claim 17” reads on (i.e. fig. 6, transmission of SDTV and HDTV and formatter 110 of Chiang, and figs. 1 and 6, transmission of different layers of Gharavi).

Regarding claims 18 – 20, 35, 41, 49 and 63 - 64, the claimed “storing the base layer and enhancement layer on a storage medium” (i.e. fig. 1, encoder 135 and 125 of Chiang“, and computer program that is executable by a processor to carry out the instruction” (i.e. col. 13 of Chiang, lines 2 – 5, microprocessor would include memories).

Regarding claims 26 – 28 and 58 – 59, the claimed “first layer is a base layer and second layer is an enhancement layer,” reads on (i.e. fig. 1, base and enhancement layers of Chiang, and fig. 1, layer 1 with respects to the other layers 2 and 3 of Gharavi), and “communicating the first layer to a low-resolution television, which consider as low quality subscriber” reads on (i.e. fig. 5 of Chiang, and col. 6, lines 6 – 7, and discussion with respect to claim 1 of Gharavi).

Regarding claims 30, 53, 68, 69 and 74 - 75, the claimed “wherein the method is executed by a television” reads on the fact that the HDTV and SDTV data are suitable for further processing and display on a high-resolution or standard resolution television (i.e. col. 10, lines 55 – 58, and col. 5, lines 45+ of Chiang).

Regarding claims 36, 42 and 54, the limitations claimed are substantially similar to claim 1; therefore the grounds for rejecting claim 1 also applies here. Furthermore, as

for the additional limitation “transmission of the base and enhancement data”, please see (fig. 1, formatter 110, 115 of Chiang, and fig. 1, MUX 118 and 120 of Gharavi) and “receiver for receiving the base layer decoder and the enhancement layer decoder in claim 54” (i.e. fig. 1, 180 of Chiang).

Regarding claim 55, the limitations claimed are substantially similar to claims 1 and 20 and are “computer program that is executable by a processor to carry out the process of generating the base and enhancement layers”, which has been discussed earlier with respect to claim 20.

Regarding claim 77 - 81, the limitation as claimed “enhancement layer contains only the high resolution portion of the source image” reads on (i.e. fig. 7 of Chiang, and fig. 1, layer 3 of Gharavi), and “wherein both the first and the second layer are used to generate high resolution image data” (i.e. col. 5, lines 47 – 50 of Chiang, and fig. 1, layer 3, of Gharavi).

Regarding claims 6, 12, 43 and 44, combination of Chiang '072 and Gharavi '420 teach the claimed “low-pass filtering” and “high-pass filtering” (i.e. fig. 2, 201 and 202 of Gharavi).

4. Claims 10, 11, 33 and 34, are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang '072 and Gharavi '420 as applied to the above claims, further in view of Yagasaki et al (US 6,414,991).

Regarding claim 33, combination of Chiang '072 and Gharavi '420 teach the claimed “decoding a base layer representing a low-resolution portion of a source image and decoding the enhancement layer, representing the high-resolution portion of the

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source image" (i.e. fig. 1, decoding portion of the image). Combination of Chiang and Gharavi does not particularly teach that the "first layer is received at a first time and the second layer is received at a second time". However, such features are well known and used in the prior art of the record as evidenced by Yagasaki '991 (i.e. figs. 5 and 15, time-base multiplexer, col. 14, lines 40+, temporal scalability). Therefore, taking the combined teaching of Chiang and Gharavi and Yagasaki as a whole, it would have been obvious to one skilled in the art at the time of the invention was made to use the teaching of Yagasaki '991 and modify the combination encoding and decoding system of Chiang and Gharavi to improve the encoding efficiency.

Regarding claim 34, combination of Chiang and Gharavi and Yagasaki teach the claimed, "first media and second media (receiving data from different media)" (i.e. col. 9, lines 5+ of Yagasaki).

Regarding claims 10 – 11, combination of Chiang and Gharavi and Yagasaki teach the claimed, "offset value" (i.e. fig. 5, FPOS of Yagasaki).

5. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang '072 and Gharavi '420 as applied to the above claims in view of Bendinelli et al (US 6,061,719).

Regarding claim 31, combination of Chiang and Gharavi teach, "reverse/decode processing of the layers as discussed above". Combination of Chiang and Gharavi does not explicitly teach the claimed "first layer is decoded from a physical medium and the second layer is decoded from a received data stream". However such features are well known and used in the prior art of the record as evidenced by Bendinelli '719 (i.e. fig. 3,

col. 2, lines 50 – 60) wherein teaches the receiver capable of receiving and decoding the data from different sources and displaying. Therefore, taking the combined teaching of Chiang and Gharavi and Bendinelli as a whole, it would have been obvious to one skilled in the art at the time of the invention was made to modify and improve the receiver system of Chiang and Gharavi with the techniques as taught by Bendinelli '719, which would make the system capable of presenting different media in conjunction with television programming to the viewers.

6. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang '072 and Gharavi '420 further in view of Dewald (US 6,317,171).

Regarding claim 32, combination of Chiang and Gharavi teach the claimed “decoding a base layer representing a low-resolution portion of a source image and decoding the enhancement layer, representing the high-resolution portion of the source image” (i.e. fig. 1, decoding portion of the image of Chiang). Combination of Chiang and Gharavi does not particularly teach the claimed “correcting an anamorphic squeeze”. However such features are well known and used in the prior art of the record as evidenced by Dewald '171 (i.e. abstract, lines 8 – 11, for anamorphic squeeze and col. 2, lines 28 – 30 for correcting the squeezed image), wherein teaches generating an image that is anamorphically squeezed in the horizontal dimension and correcting the squeezed image. Therefore it makes the limitation as claimed obvious to one skilled in the art at the time of the invention was made, which would widens the image (in the horizontal dimension) while the viewer perceives a normal wide screen image on the screen (col. 4, lines 21 – 32).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 21, 36, 42, 50, 65, 70 and 73, are rejected under 35 U.S.C. 102(b) as being anticipated by Gharavi (US 5,235,420).

Regarding claims 1 and 70, Gharavi '420 discloses, "encoding a source image" (i.e. fig.1), and the claimed "generating a base layer representing a low-resolution portion of the source image and generating an enhancement layer representing a high resolution portion of the source image" reads on (i.e. fig. 1) wherein shows generating different layers with different quality for different user subscriber, for example; Layer 1, with a low quality resolution (360 X 288, as a base layer) and layers 2 and 3, with successively higher quality/resolution (960 X 512 and 1920 X 1024), and as for "base layer and enhancement layer have an associated aspect ratio and wherein the aspect ratio of the enhancement layer differs from the aspect ratio associated with the other/base layer" reads on (i.e. layer 1, would have an aspect ratio $360/90=4$ and $288/90=3.2$ of $4/3$, and layers 2 and 3, would have aspect ratio of $960/60=16$ and $512/60=8.53$, $1920/120=16$ and $1024/120=8.53$ of $16/9$, that is different from the aspect ratio of the first layer).

Regarding claims 21, 50, 65 and 73, the limitations claimed are substantially similar to claim 1, and are the reverse (decoding) process of the encoding process,

therefore the grounds for rejecting claim 1 also applies here with respect to (i.e. fig. 6) decoding process.

Regarding claim 36, Gharavi '420 discloses, "transmitting a base layer representing a low resolution portion of an image" and "transmitting an enhancement layer representing a high resolution portion of an image" (i.e. fig. 102 and 121), and "the aspect ratio associated with the base layer differs from the aspect ratio associated with enhancement layer" are discussed above, in claim 1.

Regarding claim 42, the limitations claimed are substantially similar to claim 1, and are apparatus of the method of claim 1, therefore the grounds for rejecting claim 1 also applies here.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is **(571)272-7339**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chris Kelley** can be reached on **(571)272-7331**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

B. S. B. S.

5/3/2005


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600